

STOCKPILE REPORT

to the Congress

JANUARY - JUNE 1965

**EXECUTIVE OFFICE OF THE PRESIDENT
OFFICE OF EMERGENCY PLANNING
WASHINGTON, D. C. 20504**

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OFFICE OF THE DIRECTOR

October 25, 1965

Honorable Hubert H. Humphrey
President of the Senate

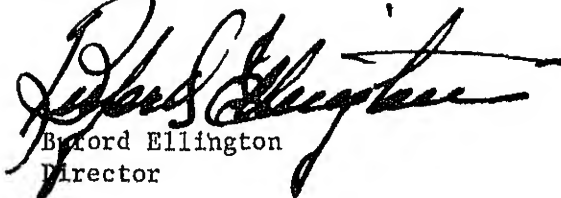
Honorable John W. McCormack
Speaker of the House of Representatives

Sirs:

Pursuant to Section 4 of the Strategic and Critical
Materials Stock Piling Act, Public Law 520, 79th
Congress, there is presented herewith the semiannual
report to the Congress on the strategic and critical
materials stockpiling program for the period
January 1 to June 30, 1965.

A statistical supplement to this report was transmitted
to you on September 14, 1965.

Sincerely,



Buford Ellington
Director

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Summary

This report covers the principal activities in stockpile planning and management during the period January 1 through June 30, 1965, under the provisions of Public Law 520 (79th Congress), the Strategic and Critical Materials Stock Piling Act.

OEP established, for the first time, a stockpile objective for silver of 165 million fine troy ounces. The new objective was a result of recent studies by OEP, in consultation with interested agencies, which showed that available supplies of silver would fall short of essential needs in an emergency.

Progress has continued on the Supply-Requirements Study for Nuclear War and Reconstruction, which will provide an estimated model of the postattack economy from which stockpile objectives can be established to meet the needs of such a situation.

Strategic materials held in all Government inventories on June 30, 1965, amounted to \$8.2 billion at acquisition cost and \$8.2 billion at estimated market value. Of this amount, the National Stockpile inventory of specification grade materials for which there are stockpile objectives totaled approximately \$5.3 billion at cost and \$5.8 billion at estimated market price. The total market value of specification grade materials in all Government inventories amounted to approximately \$7.9 billion. Comparison of the estimated market value of the objectives established with the extent to which materials on hand and on order in all Government inventories meet these objectives is shown in Chart 1.

Cumulative sales commitments by the General Services Administration for the disposal of surplus materials as of June 30, 1965, totaled over \$1.1 billion at sales value. Disposals of strategic materials during January-June 1965 amounted to \$222.4 million. This set a new record high for disposal sales and exceeded disposals in any previous full fiscal year. The July-December 1964 disposal sales reached a previous high of approximately \$201.1 million, making a record total from the National and Supplemental Stockpiles and the DPA inventory of \$423.5 million for FY 1965. This does not include approximately \$9 million in sales of mercury declared surplus by the Atomic Energy Commission and sold by GSA under the provisions of the Federal Property and Administrative Services Act of 1949, as amended.

Introduction

SUPPLY-REQUIREMENTS STUDIES— CONVENTIONAL WAR

During January-June 1965, based on supply-requirements studies for conventional war, OEP added one material—silver—to the List of Strategic and Critical Materials for Stockpiling and revised the conventional war stockpile objectives for abaca and sisal cordage fibers.

Silver.—OEP has conducted annual supply-requirements analyses of silver since 1962. Prior to FY 1965, these supply-requirements studies showed no potential deficiency in meeting military and essential industrial needs for silver during a conventional war emergency. It was believed that the sizeable stocks of silver in the Treasury reserve could be safely relied on to meet any unforeseen military and industrial needs, as well as coinage requirements. This is no longer true because of sizeable sales of silver by the Treasury. Industry has increased its purchases from the Treasury since new supplies of silver in recent years have failed to satisfy peacetime requirements and the metal is finding increased and more varied uses throughout industry. Industrial and military applications of silver have grown substantially and now exceed the level of use for silverware and jewelry. Silver has many properties which make it particularly useful for industrial products. For example, it is an excellent conductor of heat and electricity, resists corrosion, and is readily reshaped and molded. Silver is used principally in the manufacture of photographic film and sensitized paper; in brazing alloys and solders for jet aircraft, space vehicles, automobiles, and a number of other durable goods, in a variety of electrical equipment, and in electroplating. Other civilian and military items in which silver is used are silver-zinc batteries, dental and surgical equipment and plates, and in mirrors. More recently silver has played an important role in the U.S. missile program. Nozzle throats exposed to the searing heat of fast-burning fuel are now protected by tungsten rings impregnated with silver.

The 1965 supply-requirements study of silver indicated that emergency military and essential industrial requirements had increased to a greater extent than the normal availability of silver and that the potential deficiency of the metal in an emergency would be sizeable and substantially greater than previous studies had indicated. In the meantime, the drain on the Treasury reserve had grown. The deficiency was sufficiently large to indicate that the establishment of a stockpile objective was the only reasonable way to insure the availability of silver to meet essential military and industrial needs in a wartime emergency.

In June 1965, OEP designated silver as a strategic and critical material and established, for the first time, a new stockpile objective of 165 million

fine troy ounces of silver to cover these needs for a conventional war emergency. A portion of the Treasury stocks will be held aside to meet this objective.

Cordage Fibers—Abaca and Sisal.—OEP also prepared new basic data and established revised stockpile objectives for abaca and sisal during the reporting period. The revised objective for abaca was set at 50 million pounds, while the objective for sisal was established at 200 million pounds, with both materials showing a decrease from the previous objectives. The decrease in objectives for the two fibers was due to the increased use of adequate synthetics and declining military requirements.

Ocean Transportation.—OEP provided the Office of Emergency Transportation in the Department of Commerce guidance on the relative priorities for the maritime movement of bulk commodities during a conventional war. These priorities were developed with the assistance of the Departments of State, the Interior, Agriculture, and Commerce, and will be used in the preparation of peacetime maritime programs and in planning for the control and allocation of shipping in a conventional war. As of the end of June 1965, a revision of the 1963 conventional war study was being initiated.

SUPPLY-REQUIREMENTS STUDIES— NUCLEAR WAR AND RECONSTRUCTION

Although considerable progress was made on the supply-requirements study for nuclear war and reconstruction, the original target date for completion of this study was not met. It was discovered that, for meaningful results, analyses would have to be conducted to a greater depth than originally contemplated. With the cooperation of the Office of Business Economics, Department of Commerce, a major portion of the data necessary for these analyses has been obtained from the unpublished data and information accumulated by that office in preparing its 1958 Interindustry Relations Study. The results of this study were published in November 1964, and include, for the first time in the United States, official sets of interindustry (input-output) tables which are integrated into the U.S. system of national accounts. These tables will be used in the final stages of the supply-requirements study.

Some difficulties were encountered by the Department of Defense in developing estimates of potential postattack military needs but by the end of the reporting period, unofficial estimates had been prepared for almost all resources.

Because of the numerous computations required for the study and the complex interrelationships involved in the use of input-output theories, a small computer was rented in April 1965 to expedite these analyses.

Summary of Government Inventories of Strategic and Critical Materials

As of June 30, 1965, the strategic materials held in all Government inventories amounted to \$8.2 billion at acquisition cost and \$8.2 billion at estimated market value. Of this total, \$5.4 billion at cost was in the National Stockpile, \$1.4 billion in the Supplemental Stockpile, \$1.4 billion in the Defense Production Act inventory, and \$10.1 million in the Commodity Credit Corporation inventory. Of the total materials in Government inventories, \$4.8 billion at cost and \$4.3 billion at estimated market value are considered to be in excess of conventional war stockpile objectives. Over 81 percent of the market value of the total excess is made up of 13 materials consisting of aluminum, metallurgical

grade chromite, cobalt, copper, industrial diamond stones, lead, metallurgical grade manganese, nickel, quartz crystals, rubber, tin, tungsten, and zinc.

The following table is a summary of the value of all materials carried in each of the Government inventories, including those with quantities in excess of stockpile objectives for conventional war. It indicates the acquisition cost and estimated market value of materials (1) having stockpile objectives and meeting stockpile specifications, (2) having stockpile objectives but not meeting stockpile specifications, and (3) not having stockpile objectives.

Summary of Government Inventories of Strategic and Critical Materials, June 30, 1965

(Stockpile objective: Market value, \$4,071,236,900)

	Total inventory		Excess to stockpile objectives	
	Acquisition cost	Market value ¹	Acquisition cost	Market value ¹
A. Inventories having stockpile objectives:				
(1) Meeting stockpile specifications:				
National Stockpile.....	\$5,274,173,700	\$5,835,620,400	\$2,469,632,400	\$2,519,055,500
Supplemental Stockpile.....	1,357,630,900	1,287,993,700	857,009,100	825,130,300
Defense Production Act.....	1,134,659,000	801,030,000	1,031,588,800	768,197,100
Commodity Credit Corporation.....	8,883,000	8,762,000	8,647,500	8,446,600
Total.....	7,775,346,600	7,933,406,100	4,366,877,800	4,120,829,500
(2) Not meeting stockpile specifications:				
National Stockpile.....	101,261,700	67,405,500	101,261,700	67,405,500
Supplemental Stockpile.....	9,135,400	3,542,100	9,135,400	3,542,100
Defense Production Act.....	241,336,900	98,981,700	241,336,900	98,981,700
Commodity Credit Corporation.....	687,900	688,000	687,900	688,000
Total.....	352,421,900	170,617,300	352,421,900	170,617,300
B. Inventories not having stockpile objectives:				
National Stockpile.....	19,155,100	16,663,800	19,155,100	16,663,800
Supplemental Stockpile.....	29,735,300	28,630,900	29,735,300	28,630,900
Defense Production Act.....	3,901,300	1,966,000	3,901,300	1,966,000
Commodity Credit Corporation.....	561,400	563,000	561,400	563,000
Total.....	53,353,100	47,823,700	53,353,100	47,823,700
C. Summary:				
National Stockpile.....	5,394,590,500	5,919,689,700	2,590,049,200	2,603,124,800
Supplemental Stockpile.....	1,396,501,600	1,320,166,700	895,879,800	857,303,300
Defense Production Act.....	1,379,897,200	901,977,700	1,276,827,000	869,144,800
Commodity Credit Corporation.....	10,132,300	10,013,000	9,896,800	9,697,600
Total inventory.....	8,181,121,600	8,151,847,100	4,772,652,800	4,339,270,500

¹Market values are computed from prices at which similar materials are being traded currently; or, in the absence of current trading, an estimate of the price which would prevail in commercial markets. The market values are generally unadjusted for normal premiums and discounts relating to contained qualities, so that market values are understated for materials such as metal grade bauxite to the extent that the inventories are of premium quality. The market values do not necessarily reflect the amount that would be realized at time of sale.

Source: General Services Administration.

STATUS OF STOCKPILE OBJECTIVES

As of June 30, 1965, materials of stockpile grade held in the National Stockpile approximately equaled or exceeded the objective for 45 of the 77 materials on the List of Strategic and Critical Materials for Stockpiling. The inclusion of other Government inventories would increase the number of objectives approximately equaled or exceeded to 63.

The chart below shows the estimated market value of the objectives established and the extent

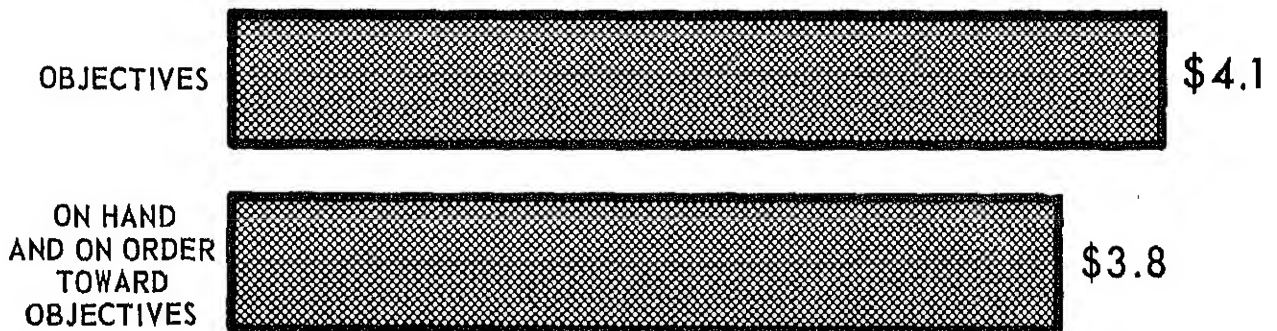
to which materials on hand and on order in all Government inventories (National Stockpile, Supplemental Stockpile, DPA, and CCC) meet these objectives. The figures do not include the quantities of materials in all Government inventories which are in excess of stockpile objectives (\$4.1 billion), materials for which there are no stockpile objectives (\$47.8 million), and materials not meeting stockpile specifications (\$170.6 million). A similar chart, shown in the previous report, included only materials on hand in the National Stockpile.

STATUS OF STOCKPILE OBJECTIVES

AS OF JUNE 30, 1965

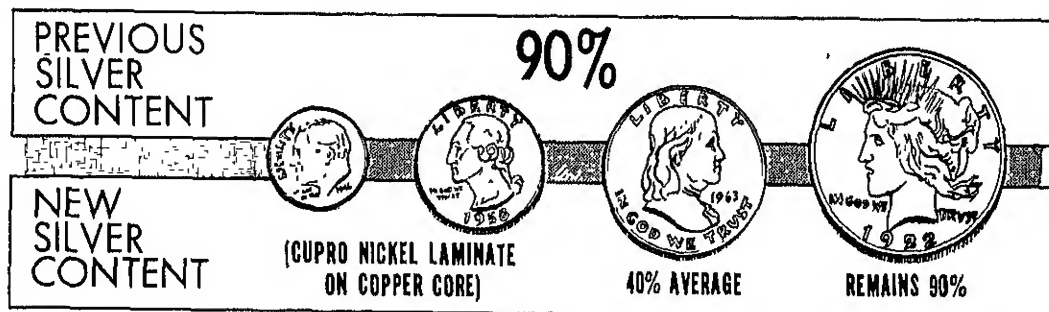
(In Billions of Dollars)

MARKET VALUE



OBJECTIVE FOR SILVER ESTABLISHED

In June 1965, a stockpile objective of 165 million fine troy ounces was established for silver to meet industrial and military needs in time of emergency. Additional steps to conserve the Government's inventory of silver are being taken by the Treasury Department.



New Coins Will Contain Less Silver

The materials on the List of Strategic and Critical Materials for Stockpiling are shown in the following table. Achievement of stockpile objectives for conventional war is shown when quantities of materials on hand in Government inventories are sufficient to complete the stockpile objectives. Footnotes indicate the extent to which materials in the Government inventories are required to meet these objectives. Also footnoted are those materials for which upgrading subobjectives as of June 30, 1965, had not been achieved.

Status of Stockpile Objectives, Strategic and Critical Materials on Hand in Government Inventories (Specification Grade)

June 30, 1965

Materials	Inventory equals or exceeds objective
Aluminum.....	x
Aluminum oxide, fused, crude.....	x
Antimony.....	x
Asbestos, amosite.....	(1)
Asbestos, chrysotile.....	--
Bauxite, metal grade, Jamaica type.....	(1)
Bauxite, metal grade, Surinam type.....	(1)
Bauxite, refractory grade.....	x
Beryl.....	(1)
Bismuth.....	(1)
Cadmium.....	x
Castor oil.....	x
Celestite.....	(1)
Chromite, chemical grade.....	(1)
Chromite, metallurgical grade.....	x
Chromite, refractory grade.....	--
Cobalt.....	x
Columbium.....	(2) x
Copper.....	(2) x
Cordage fibers, abaca.....	x
Cordage fibers, sisal.....	x
Corundum.....	--
Diamond dies, small.....	--
Diamond, industrial: Crushing bort.....	x
Diamond, industrial: Stones.....	(1)
Feathers and Down, waterfowl.....	x
Fluorspar, acid grade.....	(1)
Fluorspar, metallurgical grade.....	(1)
Graphite, natural--Ceylon, amorphous lump.....	(1)
Graphite, natural--Malagasy, crystalline and Malagasy, crystalline.....	x
Iodine.....	--
Jewel Bearings.....	--
Kyanite-Mullite.....	x
Lead.....	x

Materials	Inventory equals or exceeds objective
Magnesium.....	x
Manganese, battery grade, natural ore....	x
Manganese, battery grade, synthetic dioxide.....	x
Manganese, chemical grade, type A ore....	(1)
Manganese, chemical grade, type B ore....	(1)
Manganese, metallurgical grade.....	(1) (2)
Mercury.....	(1)
Mica, muscovite block, stained and better	x
Mica, muscovite film, first and second qualities.....	--
Mica, muscovite splittings.....	x
Mica, phlogopite block.....	x
Mica, phlogopite splittings.....	x
Molybdenum.....	(2) x
Nickel.....	x
Opium.....	(2) x
Platinum group metals, iridium.....	--
Platinum group metals, palladium.....	--
Platinum group metals, platinum.....	x
Pyrethrum.....	x
Quartz crystals.....	x
Quinidine.....	--
Quinine.....	x
Rare earths.....	x
Rubber, crude, natural.....	x
Rutile.....	--
Sapphire and ruby.....	--
Selenium.....	--
Shellac.....	x
Silicon carbide, crude.....	x
Silver.....	(1)
Sperm oil.....	x
Talc, steatite, block and lump.....	x
Tantalum.....	--
Thorium.....	(1)
Tin.....	x
Titanium.....	(1)
Tungsten.....	(2) x
Vanadium.....	(2) x
Vegetable tannin extract, chestnut.....	x
Vegetable tannin extract, quebracho.....	x
Vegetable tannin extract, wattle.....	x
Zinc.....	x

xInventory in the National Stockpile equals or exceeds objective.

--Inventory deficit.

¹Sufficient quantities are on hand in total Government-owned inventories to complete the objectives.

²Although total quantities of basic and up-graded forms are equal to the overall objective, the upgrading of the basic material to more readily usable forms for prompt emergency use has not been completed.

OTHER MATERIALS IN GOVERNMENT INVENTORIES

In addition to inventories of specification grade materials, Government inventories contain nonspecification grades which are not credited to stockpile objectives, materials that have been removed from the stockpile list, and others for which there are no stockpile objectives. Quantities on hand of nonspecification grades of materials and materials with no stockpile objectives as of June 30, 1965, are indicated in the following tables.

Most of the nonspecification grade materials in the National Stockpile were acquired by the transfer of Government-owned surpluses to the stockpile after World War II while others were accepted as contract termination inventories. Several were of specification grade when acquired but no longer qualify due to changes in industry practices and other technological advances. Disposal action for many of the items shown in the following tables has been authorized by OEP, while others are under disposal consideration. Inventory changes during the reporting period were due primarily to disposals, or to reclassification and other adjustments of the inventories.

*Nonspecification Grades of Materials in All Government Inventories Not Credited to Stockpile Objectives**

As of June 30, 1965

Material	Unit	Inventory			Total inventory
		National	Supplemental and CCC	DPA	
Aluminum.....	ST	1,787		5,331	7,118
Asbestos, chrysotile.....	ST		4,613	2,348	6,861
Beryl.....	ST			456	456
Bismuth.....	Lb.	36,580			36,580
Celestite.....	SDT	29,017			29,017
Chromite, chemical grade.....	SDT		60		60
Chromite, metallurgical grade.....	SDT	59,454	3,280	985,114	1,047,848
Cobalt.....	Lb.			6,210,735	6,210,735
Columbium.....	Lb.	1,317,737	31,979	76,163	1,425,869
Diamond dies, small.....	Pc.	8,342			8,342
Fluorspar, acid grade.....	SDT	4,960	4,548	2,383	11,891
Graphite, other than Ceylon and Malagasy, crystalline.....	ST	672			672
Jewel bearings.....	Pc.	14,715,973			14,715,973
Manganese, battery grade, natural ore.....	SDT		4,574		4,574
Manganese, metallurgical grade.....	SDT	631,692	8,279	1,030,047	1,670,018
Mercury.....	Fl.	9			9
Mica, muscovite block, stained and better....	Lb.	346,243	135,192	3,785,965	4,267,400
Mica, muscovite film, 1st and 2d quality.....	Lb.	27,757			27,757
Mica, phlogopite block.....	Lb.	205,638			205,638
Opium, alkaloid and salts.....	Lb.	2,166			2,166
Platinum group metals, platinum.....	Tr.Oz.	33			33
Quartz crystals.....	Lb.	621,709			621,709
Silicon carbide, crude.....	ST		57		57
Talc, steatite, block and lump.....	ST	20			20
Tantalum.....	Lb.	1,485,574	7,997	65,215	1,558,786
Tungsten.....	Lb.	16,275,224	1,295,481	25,260,597	42,831,302

*Quantities may be shown on this table and also on the disposal table when sales commitments have been made, but the material has not moved out of inventory.

Source: General Services Administration.

*Materials in All Government Inventories for Which There Are No Stockpile Objectives**

As of June 30, 1965

Material	Unit	Inventory			Total inventory
		National	Supplemental and CCC	DPA	
Aluminum oxide, abrasive grain.....	SDT		50,905		50,905
Asbestos, crocidolite.....	ST	1,567	43,830		45,397
Coconut oil.....	Lb.	6,517,409			6,517,409
Colemanite.....	LDT		67,636		67,636
Cryolite.....	ST			11,608	11,608
Diamond dies, other than small.....	Pc.	34			34
Diamond tools.....	Pc.	64,178			64,178
Hyoscine.....	Oz.	2,108			2,108
Mica, muscovite block, stained B and lower....	Lb.	4,320,402			4,320,402
Mica, muscovite film, 3d quality.....	Lb.	500,029			500,029
Palm oil.....	Lb.	3,697,425			3,697,425
Platinum group metals, rhodium.....	Tr.Oz.	618			618
Platinum group metals, ruthenium.....	Tr.Oz.		15,001		15,001
Rare earths residue.....	Lb.			6,048,619	6,048,619
Silk noils.....	Lb.	969,479			969,479
Silk, raw.....	Lb.	113,615			113,615
Silk waste.....	Lb.	10,445			10,445
Talc, steatite ground.....	ST	3,901			3,901
Thorium residue.....	Lb.			848,354	848,354
Zirconium ore, baddeleyite.....	SDT	16,514			16,514
Zirconium ore, zircon.....	SDT	1,920			1,920

*Quantities may be shown on this table and also on the disposal table when sales commitments have been made, but the material has not moved out of inventory.

Source: General Services Administration.

National Stockpile Activities

PROCUREMENT AND UPGRADING

The OEP Strategic Stockpile Procurement Directive for FY 1965, issued in July 1964, provided for the cash purchase of only one material, jewel bearings. In addition, the Directive provided for the stockpile acquisition through barter of 10 materials--refractory grade chromite, oxygen free copper, corundum, iodine, low carbon ferromanganese, medium carbon ferromanganese, silicomanganese, palladium, quinidine, and selenium. The Directive also provided for the upgrading of certain materials in the stockpile to columbium metal, ferrocolumbium, ferromolybdenum, morphine sulphate, capacitor grade tantalum, ferrotungsten, crystalline tungsten carbide, hydrogen reduced tungsten powder, and ferrovanadium.

The FY 1965 Stockpile Procurement Directive did not originally include platinum-iridium, because of the tight market, nor rutile, because a determination had not been made whether or not to credit titanium to offset the rutile objective-deficit. In March 1965, an amendment to the Procurement Directive authorized the acquisition of

platinum-iridium by barter over a three-year period. It also added rutile to the barter list since crediting titanium to the rutile objective would mean excessive capitalization of that account. In May, the attempt to obtain OFHC type copper by barter was abandoned because of the tight world copper market and, by amendment to the FY 1965 Procurement Directive, the General Services Administration was authorized to continue acquisition of this form of copper by the upgrading of other forms of copper in inventory, with payment for the upgrading to be made by the use of materials authorized for disposal.

No new barter contracts for strategic materials were negotiated by the Commodity Credit Corporation during the report period.

During January-June 1965, the General Services Administration acquired jewel bearings for the stockpile, in accordance with the FY 1965 Stockpile Procurement Directive, under a contract with the Bulova Watch Company. GSA also awarded a construction contract for modernization and expansion of the Government-owned jewel bearings plant at Turtle Mountain, Rolla, North Dakota, for

a cost of \$338,000. The plant is operated by the Bulova Watch Company under a lease and stockpile contract with the Government.

Eleven contracts were executed with Swiss manufacturers for production machinery to provide for plant modernization and expansion of the Rolla facility. The machinery will cost approximately \$360,000, and delivery is expected to be completed in 1966. The types of equipment required to modernize the production facility and to meet mobilization production requirements were determined by a technical review group. This group, consisting of two representatives from GSA and one consultant from the Department of Defense, had previously visited jewel bearing equipment manufacturing facilities in Switzerland.

GSA also negotiated five contracts for upgrading materials, all of which provided for payment of the conversion and transportation costs involved with excess stockpile materials.

Ferromolybdenum—Conversion of Government-furnished molybdenite concentrates to 3,475,000 pounds of molybdenum contained in Grade B ferromolybdenum. GSA will pay for such upgrading services with excess stockpile ferromolybdenum.

Ferrovandium—Conversion of Government-furnished vanadium pentoxide to 400,000 pounds of vanadium contained in ferrovandium of three grades. GSA will pay for these services with excess stockpile tin.

Ferrocolumbium—Conversion of Government-furnished columbite concentrates to 360,000 pounds of columbium contained in ferrocolumbium. GSA will make payment with excess stockpile tin and tungsten (50% each).

Ferrotungsten—Conversion of Government-furnished tungsten concentrates to 148,300 pounds of tungsten contained in ferrotungsten. GSA will pay for services with excess stockpile tin.

OFHC Copper—A new contract for the conversion of 8,000 additional short tons of cathode copper to oxygen free, high conductivity copper was executed by GSA. Payment will be made in electrolytic nickel cathode from the Defense Production Act inventory.

DISPOSAL PROGRAM ACTIVITIES

During January through June 30, 1965, the Interdepartmental Disposal Committee, established by the Director of OEP in 1963 in accordance with recommendations set forth in the Executive Stockpile Committee's Report which the President approved on January 30, 1963, continued its activity with respect to long-range programming for the disposal of surplus materials in Government inventories. This Committee, chaired by OEP and composed of representatives from 12 Federal departments and agencies having primary interest in stockpile matters, reviews all aspects of any

proposed disposal program and makes recommendations to the Director. The work of the Committee is supplemented by a subcommittee, chaired by GSA, whose responsibility it is to study and determine the scope of each program as to quantity, rate of sales, and other factors that must be resolved to insure that the interests of producers, processors, consumers, and foreign governments, as well as those of the Government, are carefully considered. During the program development stage, appropriate consultations are held with industry and foreign governments to obtain their views and the benefit of their advice.

During the reporting period, the Director of OEP gave final approval on nine long-range disposal programs—two for the release of materials from the DPA inventory (subspecification metallurgical grade manganese and tungsten), and seven for the release of materials from the National and Supplemental Stockpiles, subject to Congressional approval. These are colemanite, chemical chromite, quartz crystals, talc, and vegetable tannins consisting of chestnut, quebracho, and wattle.

During this same period, the full Committee and the subcommittee completed disposal recommendations for five more long-range disposal programs, all of which were acted upon favorably by the Director with instructions to GSA to develop tentative plans as a basis for consultations with responsible agencies and other interested parties.

As of June 30, 1965, 51 long-range disposal programs (52 considering nickel as two programs—Part I for DPA nickel, which does not require Congressional approval, and Part II for National Stockpile nickel which requires Congressional approval) have been considered since the inception of the Committee. The following gives the present status of these programs:

<u>Program status</u>	<u>Number of programs</u>
Authorized for disposal.....	16
Authorized by Congress.....	3
Authorized by OEP (DPA materials).. ¹	13
Pending Congressional action.....	1
Approved by OEP for submission to Congress.....	10
Draft plans under discussion with industry and foreign governments.....	10
GSA developing draft plan.....	2
Disposal under consideration.....	4
Deferred temporarily ²	19
Total programs.....	152

¹Includes DPA nickel (Part I) as a separate program. Release of DPA materials does not require Congressional approval.

²Disposal action temporarily deferred due to unfavorable market conditions, international situations, or pending supply-requirement studies.

In addition to approving the three long-range disposal programs indicated in the above table, the Congress enacted Public Law 89-9 on April 2,

1965, authorizing the disposal of 200,000 short tons of lead, 200,000 short tons of zinc, and 100,000 short tons of copper to aid in alleviating the domestic supply shortage of these materials.

Of the 51 long-range disposal programs that have been under consideration (52 as shown in the above table considering nickel in two parts), 47 involve materials in excess of stockpile needs and for which there are objectives. (The remaining 4 programs cover 2 materials for which there are no stockpile objectives, and 2 nonspecification materials for which there are stockpile deficits.) This leaves 30 of the 77 materials currently on the stockpile list with objectives which have not been considered for long-range programming by IDC. Of the 30 materials, 14 are in a deficit stockpile position, two are in balance, and 6 had been authorized for long-range disposal prior to establishment of the IDC and these programs are now in effect. Seven materials are temporarily deferred pending further review of supply requirements, and one (cordage fibers--sisal) is currently being disposed of on a short-term basis.

During January-June 1965, interested agencies concurred in, and OEP granted final approval for, a total of 13 disposal actions (9 long-range, one short-term, and 3 emergency releases to implement Congressional action), of which 10 involve releases from the National and Supplemental Stockpiles, and 3 from the DPA inventory. (Materials held in the National and Supplemental Stockpiles are subject to Congressional authorization.) The date of OEP approval, together with the status of these disposal actions, follow:

January 11--Colemanite (67,600 long dry tons).-- This is nonobjective material obtained through barter and held in the Supplemental Stockpile. This long-range disposal program is subject to Congressional approval.

January 13--Asbestos, Chrysotile (850 short tons).-- This quantity of subspecification grade crude No. 3 asbestos was authorized as a short-term release from the DPA inventory. Although sales offerings have been made, there have been no responsive bids to date.

January 27--Tungsten (77,900,000 pounds).-- Authorization was granted for the long-range disposal of this quantity of excess stockpile and non-stockpile grades of tungsten ores and concentrates from the DPA inventory, starting at a modest rate of 1,000,000 pounds per year. Disposal actions have been initiated.

March 11--Vegetable Tannin, Chestnut (15,000 long tons),

March 11--Vegetable Tannin, Quebracho (111,457 long tons), and

March 11--Vegetable Tannin, Wattle (23,962 long tons).-- These quantities represent the amounts excess to National Stockpile requirements. Long-range disposal plans for these materials are subject to Congressional approval.

March 31--Lead (200,000 short tons), and

March 31--Zinc (200,000 short tons).-- Authorization was granted for an emergency release of 200,000 short tons of each material (150,000 tons for commercial disposal and 50,000 tons for direct Government use) from the National and Supplemental Stockpiles to implement H.R. 1496 (Public Law 89-9, enacted April 2, 1965) to help alleviate the supply shortage.

April 8--Copper (100,000 short tons).-- The emergency release of 100,000 short tons of copper from the National Stockpile was authorized to implement Public Law 89-9, enacted April 2, 1965, to relieve the critical shortage in supply.

April 9--Chromite, Chemical Grade (659,100 short tons).-- Approximately 659,100 short tons of chemical grade chromite were authorized for release from the Supplemental Stockpile under a long-range program, subject to Congressional approval.

April 13--Manganese, Metallurgical (1,749,066 short dry tons).-- The quantity represents excess metallurgical manganese in the DPA inventory. This material consists of both low-grade manganese ore located at domestic purchase depots and higher grade manganese having chemical or physical deficiencies which do not meet current stockpile purchase specifications and which are not required for blending purposes. No acceptable bids were received from the initial June 23, 1965 offering covering the low-grade ore.

April 28--Talc, Lump Steatite (1,049 short tons).-- Authorization was granted for the long-range release of 1,049 short tons of lump steatite talc from the National Stockpile, subject to authorization of the Congress.

June 30--Quartz Crystals (4,800,000 pounds).-- Approximately 4,800,000 pounds of quartz crystals covering the nonstockpile grade quartz crystals and the quantities excess to stockpile needs in the National and Supplemental Stockpiles were authorized for long-range release, subject to Congressional approval.

As of June 30, 1965, cumulative sales commitments of surplus materials negotiated by GSA totaled over \$1.1 billion at sales value, of which \$746.4 million were from the National and Supplemental Stockpiles, \$390.0 million from the Defense Production Act inventory, and \$10.6 million from the Federal Facilities Corporation (tin). During the January-June 1965 period, GSA sales of excess strategic and critical materials totaled approximately \$222.4 million in gross sales value. This set a new record high for disposal sales and exceeded disposals in any previous full fiscal year. The July-December 1964 disposal sales reached a previous high of approximately \$201.1 million, making a record total of \$423.5 million for FY 1965 from the National and Supplemental Stockpiles and the DPA inventory. Of the six-months total of \$222.4 million, disposals from the National Stockpile accounted for \$196.9 million, and approximately \$25.5 million from the DPA inventory.

Sales to industry were approximately \$208.1 million, and Government-use sales amounted to \$14.3 million. Total sales commitments of \$222.4 million were approximately \$43.1 million in excess of the acquisition cost of \$179.3 million. GSA executed approximately 2,200 sales contracts covering these sales.

The following materials made up the major disposals during January-June 1965: aluminum,

approximately \$2.8 million; copper, \$85.9 million; lead, \$6.2 million; molybdenum, \$6.1 million; nickel, \$9.5 million; rubber, \$33.4 million; tin, \$52.6 million; and zinc, \$23.2 million. These materials accounted for approximately 98.8% of the total disposals during the period.

A list of the materials sold is shown on the following table.

Disposal of Strategic Materials

January-June 1965

Material	Unit	Sales commitments	
		Quantity	Sales value
NATIONAL STOCKPILE INVENTORY:			
Antimony.....	ST	1,116	\$921,289
Cadmium.....	Lb.	200	610
Copper.....	ST	87,777	71,432,055
Copper and copper base alloys.....	ST	165	132,062
Cordage fibers, sisal.....	Lb.	1,261,864	130,922
Cupro nickel ingots.....	Lb.	732,000	297,286
Diamond dies, industrial, large.....	Pc.	352	1,525
Feathers and down.....	Lb.	73,700	184,834
Lead.....	ST	19,565	8,166,455
Lead castings.....	Lb.	46,800	6,520
Magnesium ingots.....	ST	1,100	705,519
Mica, punch.....	Lb.	220,230	9,470
Molybdenum.....	Lb.	3,019,783	6,121,664
Nickel oxide powder.....	Lb.	1,002,091	741,669
Nickel, various forms.....	Lb.	66,834	53,967
Palm oil.....	Lb.	6,048,799	567,802
Rubber.....	LT	61,054	33,385,234
Shellac.....	Lb.	263,220	54,001
Talc, steatite, block and lump.....	ST	17	2,656
Tantalum (nonspec. form).....	Lb.	25,664	222,716
Tin.....	LT	14,170	52,560,248
Zinc.....	ST	76,270	23,184,310
Zinc engraving plates.....	Lb.	221,087	33,619
Zirconium ores, baddeleyite.....	SDT	15	600
Total National Stockpile.....	196,917,023
DEFENSE PRODUCTION ACT INVENTORY:			
Aluminum.....	ST	5,801	2,812,334
Copper.....	ST	20,650	14,020,665
Nickel.....	Lb.	7,739,269	5,883,401
Nickel, ferro.....	Lb.	3,700,428	2,789,966
Rare earth-bearing materials.....	SWT	19	2,750
Total DPA.....	25,509,316
GRAND TOTAL.....	\$222,426,339

Source: General Services Administration.

Notes on Strategic and Critical Materials

January-June 1965 Activity

ALUMINUM

As of January 1, 1965, the quantity of aluminum remaining unsold under the 135,000 short tons program authorized for disposal from the DPA inventory in four equal offerings starting May 1, 1963, and ending December 31, 1964, amounted to about 34,800 short tons. Of this total, 25,000 tons represented set-asides restricted for small firms, none of which was sold. In March 1965, GSA made a final offering of the 34,800 short tons and sold only 5,801 short tons valued at \$2.8 million, bringing the cumulative sales since May 1963 to 106,000 short tons, valued at \$49.3 million. The 29,000 short tons remaining unsold are to be included as a part of the long-range aluminum disposal program now under consideration.

COPPER

As indicated in the previous report, OEP authorized the sale of 20,000 short tons of copper in December 1964 to help relieve the critical shortage in supply. This was sold during the reporting period at a sales value of \$13.6 million. On April 2, 1965, the Congress enacted PL 89-9 authorizing the release of an additional 100,000 short tons of copper contained in brass, bronze, and miscellaneous forms, including approximately 30,000 short tons of fire-refined copper from the National Stockpile. Consumers purchasing the copper were required to file formal applications with the Department of Commerce indicating the need of the material for defense production or to avoid hardship, and that its use would be restricted to domestic consumption. Offers to buy far exceeded the quantity available for release. Sales contracts based on allocations furnished by the Department of Commerce were forwarded by GSA to about 235 companies. Sales commitments as of June 30, 1965 totaled 87,777 short tons, valued at \$71.4 million.

During the reporting period, another 650 short tons of copper, valued at \$448,000, were transferred from the DPA inventory to the Department of Defense for direct Government use, and sales of 366 short tons of cupro-nickel, valued at approximately \$297,300, and 165 short tons of copper and copper-base alloys, valued at \$132,000, were made from the National Stockpile.

Receipts of oxygen free, high conductivity copper under a previously executed conversion contract amounted to 2,079 short tons during this period. Payment for this conversion and all transportation costs involved is being made with copper from the DPA inventory. This completed delivery of OFHC copper under the FY 1964 Procurement Directive.

COLUMBIUM—TANTALUM

Deliveries of columbium and tantalum metals were completed under a contract, executed late in FY 1963, calling for upgrading columbium and tantalum bearing materials in the stockpile. Approximately 12,287 pounds of columbium metal and 32,210 pounds of tantalum metal were tendered for return to the stockpile during January-June 1965. These services were paid for with excess tungsten concentrates and ferronickel in the DPA inventory.

During the reporting period, sales of 20,300 pounds of nonspecification tantalum metal were made to industry for \$190,500. In addition, 5,364 pounds were transferred to the Atomic Energy Commission for \$32,200.

CORDAGE FIBERS

A total of 1,261,864 pounds of surplus sisal fiber from the National Stockpile was sold for \$130,922, under the authorization of Public Law 88-617, which approved the disposal of a total of 9.5 million pounds. The proposed disposal of 47 million pounds of surplus abaca from the National Stockpile was submitted to the Congress and notice was published in the Federal Register on April 1, 1965.

FEATHERS AND DOWN

Transfers to the Department of Defense for use in military sleeping bags and medical pillows amounted to 73,700 pounds of feathers and down, with a value of \$184,834.

LEAD

Of the 150,000 short tons of lead authorized for sale to industry from the National Stockpile under Public Law 89-9, enacted April 2, 1965, 19,565 short tons, valued at approximately \$6.2 million, were sold.

Previously the Congress had approved the disposal of 46,800 pounds of lead castings from the National Stockpile, all of which were sold during the reporting period with a sales value of \$6,520.

MOLYBDENUM

In April 1964, OEP approved, and on July 14, 1964, the Congress authorized the disposal of 11 million pounds of surplus molybdenum from the National Stockpile. The final 3 million pounds, valued at \$6.1 million, were sold in February 1965, bringing to \$20.1 million the total for the 11 million pounds.

NICKEL

The disposal program for nickel, approved by OEP in the latter part of 1964, is divided into two

parts. Part I consists of approximately 105 million pounds of excess nickel in the DPA inventory, and Part II consists of about 224 million pounds in the National Stockpile, which requires Congressional authority for disposal. The request for this authority has been submitted to the Congress. The initial sales plan (Part I—DPA inventory) anticipated a sales expectancy of approximately 15 million pounds the first year, starting December 1964. Total sales commitments to June 30, 1965 amounted to approximately 14 million pounds, valued at \$10.5 million, since the inception of the program in December. The sales rate, starting July 1, 1965, is being increased from 15 to 25 million pounds annually, exclusive of direct Government-use.

PALM OIL

A total of 6,048,799 pounds of palm oil was sold for \$567,800. On June 30, 1965, GSA offered the remainder of the palm oil in the National Stockpile, approximately 3,725,000 pounds, for sale.

RUBBER

As of January 1, 1965, there remained 102,463 long tons of rubber to be sold under the 470,000 long tons authorized for sale in 1962. During the reporting period, sales totaled 61,054 long tons, valued at \$33.4 million, making the cumulative sales to date 428,591 long tons, valued at \$268.6 million, leaving an unsold balance of 41,409 long tons. On December 9, 1964, OEP approved the disposal of an additional 620,000 long tons of surplus rubber from the National Stockpile, subject to Congressional approval. The Congress authorized this release on September 2, 1965, without regard to the normal six-months waiting period.

Disposal procedures have been amended from time to time with the view of increasing sales within existing statutory limitations. As a result of these revisions and the acceleration of the use of surplus rubber in connection with Government activities, total sales have steadily increased during the past three fiscal years from 69,905 long tons in 1963 to 85,834 in 1964, and 115,660 in 1965. Currently, GSA is authorized to sell 72,000 long tons per year commercially and an unlimited amount for use in connection with Government activities.

During the past year, the Agency for International Development has accelerated the use of surplus rubber in lieu of dollars to recipient countries previously acquiring rubber in foreign markets, and also in connection with the procurement of tires and tubes for such countries. The Defense Department has increased the use of Government-owned rubber in the procurement of military truck tires, retreading materials, and in the purchase of aircraft tires for the three Services. Although the use of surplus rubber for Government activities did not get under way until 1962, such programs have represented approximately 33% of total stockpile sales since that date. During the reporting period, the utilization of rubber in

Government programs accounted for 20,519 long tons, with a value of approximately \$10.0 million.

SHELLAC

Sales of 263,220 pounds of shellac were made from the National Stockpile for a total sales value of \$54,000.

SILK

The disposal of the entire inventories of raw silk (113,500 pounds) and silk noils (969,500 pounds) was approved by the Congress on August 6, 1965. These materials were removed from the stockpile list.

TIN

Sales of tin from the National Stockpile during the reporting period amounted to 14,170 long tons, valued at \$52.6 million, bringing total sales to 57,343 long tons, valued at \$190.8 million, since disposals were initiated on September 12, 1962. Of the 14,170 tons sold during this period, 13,439 tons were sales to industry, 614 tons were sold in connection with AID programs, and 117 tons were utilized indirectly by the Government in payment for the upgrading of inventory materials in the National Stockpile. The 50,000 long tons disposal program authorized in 1962 was completed during this period. Current sales are being made against the 98,000 ton long-range disposal program authorized by the Congress on July 2, 1964. A sales expectancy for the 12 months period—March 22, 1965 through March 31, 1966—has been set at 28,000 long tons.

ZINC

The initial offering of approximately 75,000 short tons of the 150,000 short tons of zinc authorized for disposal to industry from the National Stockpile under Public Law 89-9 was substantially oversubscribed. Bids received totaled over 218,000 short tons. Of the 75,000 short tons offered, valued at \$22.6 million, 57,000 short tons were sold to domestic producers of primary and secondary slab zinc and to importers of record who agreed to distribute the metal at no profit; 8,000 short tons were sold to independent alloyers of zinc base alloys; and approximately 10,000 short tons were sold to other purchasers for domestic consumption. Of the 50,000 short tons authorized under Public Law 89-9 for direct Government use, approximately 2,000 tons, valued at \$624,350 were released to the Bureau of the Mint for coinage purposes. On July 1, 1965, GSA offered the remaining 75,000 tons authorized for sale.

In addition to the above sales, 221,087 pounds of zinc engraving plates were sold during the period from the National Stockpile, with a sales value of \$33,619.

On June 15, 1965, H.R. 9047 was introduced authorizing the commercial disposal of another 300,000 short tons of zinc, and an additional 50,000 short tons for direct Government use.

Activities of the General Services Administration Relating to Stockpiling of Strategic and Critical Materials

The General Services Administration is charged with the general operating responsibility, under policies set forth by OEP, for stockpile management, including (1) purchasing and making commitments to purchase, transferring, rotating, upgrading, and processing of metals, minerals, and other materials; (2) expansion of productive capacity through the installation of additional equipment in Government-owned plants and the installation of Government-owned equipment in privately-owned facilities; (3) storage and maintenance of all strategic materials held in Government inventories; and (4) disposal of excess stockpile materials, including the development of disposal plans, selling the materials, and arranging for Government use of such materials.

The activities of the General Services Administration particularly in connection with procurement, upgrading, and disposals have been summarized in the earlier sections of this report.

STORAGE AND MAINTENANCE

On June 30, 1965, GSA provided for the storage of strategic and critical materials at 152 locations as follows:

Type of facility	As of 6-30-65	Change in last 6 months
Military depots.....	47	-1
GSA depots.....	25	0
Other Government-owned sites....	13	0
Leased commercial sites.....	15	0
Industrial plant sites.....	39	0
Commercial warehouses.....	13	-2
Total.....	152	-3

Approximately 52.0 million tons of strategic materials were stored at the above facilities. About 527,000 tons of materials were received into storage between January and June 1965. The bulk of the tonnage received was bauxite acquired under the CCC barter program.

Shipments from storage depots of materials sold under disposal programs amounted to approximately 403,000 tons. Of particular significance was the shipment of large quantities of brass, copper, lead, tin, and zinc.

GSA completed evacuation of the warehouse at the GSA-DMS Buffalo Depot during the period. Approximately 1,487 tons of various materials were either shipped out under the disposal sales program or relocated to other GSA depots. As a result of evacuating this warehouse, annual storage costs were reduced by \$236,000 and major roof rehabilitation, at a cost of \$1,440,000, has been avoided.

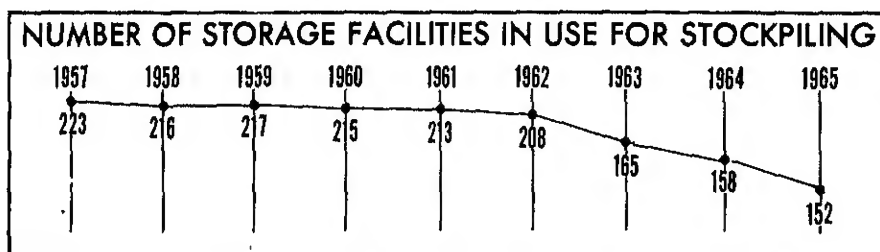
Evacuation of the GSA-DMS Iona Island Depot, Iona Island, New York, was also completed during the period. GSA relocated 8,883 tons of various materials to other depots, and 8,163 tons of rubber were shipped under the disposal sales program. Annual storage costs were reduced by \$260,000.

The disposal program on vegetable oils has resulted in the deactivation of two tank farms. During the report period, the tank farm at the GSA depot in Scotia, New York, was completely closed. This lowers annual storage costs by \$89,000. The tank farm at the Naval Air Station in Olathe, Kansas, was evacuated and declared excess to stockpile requirements in December 1964, resulting in an annual reduction of \$30,000 in stockpile storage costs.

A total of 11,773 tons of cordage fiber and cryolite was shipped from commercial warehouses under disposal and relocation programs. This action reduces annual storage charges by approximately \$81,000.

Crude rubber continued to be shipped to commercial warehouses in the New England area in accordance with the OEP directive to maintain tonnage in the area in proportion to its share of national usage. GSA relocated 13,194 tons to commercial warehouses in New England during the January-June 1965 period.

On January 18, GSA assumed direct custodial responsibility for the 67,000 tons of stockpile materials located at the Naval Supply Center in Stockton, California. This facility is being partially inactivated by the Department of Defense.



Activities of the Department of Commerce Relating to Stockpiling of Strategic and Critical Materials

The Department of Commerce has been delegated a number of responsibilities with regard to the National Stockpile and these, in turn, have been assigned to the Business and Defense Services Administration (BDSA) within the Department. BDSA prepares for the Office of Emergency Planning estimates of essential civilian and war-supporting requirements for strategic materials in a mobilization period, a basic element in determining stockpile objectives. In certain limited cases, it also prepares estimates of the mobilization supply of such materials. It reviews plans for disposal of surplus stockpile materials and provides OEP or GSA with its evaluation of the market impact of proposed schedules of sales. In addition, it develops recommendations for purchase specifications and storage procedures. Finally, it prepares special studies for OEP regarding problems relating to strategic materials and submits to OEP, on behalf of the Department, recommendations or advice on stockpile policies and programs.

ESTIMATES OF ESSENTIAL CIVILIAN AND WAR-SUPPORTING REQUIREMENTS

The principal procedure for estimating essential civilian and war-supporting requirements involves an analysis of each major end-use item containing significant quantities of the material to be stockpiled. Recent trends in usage are reviewed, prospective technological developments are taken into account, and the essentiality of the item or of the use of the material in the item during mobilization is determined. Finally, the extent to which wartime production of the item would parallel previously determined wartime production levels of the category of which it is a part is evaluated. These factors then become the basis for estimating mobilization requirements for the material for the given end-use item. Similar calculations are applied to other end-use items and the sum of them becomes the total of essential requirements for the material. The complexity of the work and the specialization of the data is such that extensive industry assistance in specific areas and industry surveys are often required.

Pending development by OEP of revised mobilization index factors for use in the next review of stockpile objectives, scheduled for the fall of this year, preparation of new estimates of essential civilian requirements in a conventional war has been held in abeyance except in those cases where the need for a prompt objective review was urgent. During the first half of 1965, therefore, only three requirements estimates were submitted to OEP—abaca, sisal, and refractory grade bauxite. Meanwhile, guidelines for developing requirements esti-

mates in a nuclear war continue to be studied. When authorized by OEP, they will permit an evaluation of potential needs under these circumstances which will then be related to conventional war needs with modification of objectives where indicated.

PURCHASE SPECIFICATIONS AND SPECIAL INSTRUCTIONS

Materials stockpiled for war use must be in a form which permits efficient utilization and which provides optimum storage characteristics. Purchase specifications are designed to assure these ends and in their preparation much weight is given to industrial guidance and experience with the materials. Industry specialists and Government experts are consulted in the matter and their views correlated when such specifications are developed or revised. In addition, special purchase and acceptance instructions are issued which cover types of materials to be credited to the objectives, packaging requirements, and other administrative procedures.

Revisions of Purchase Specifications and Special Instructions prepared for OEP and issued during this period involved the following materials:

Purchase Specifications

Bauxite, chemical grade	Morphine sulphate
Corundum	Palladium
Diamond dies	Quinidine
Ferromanganese, low and medium carbon	Tantalum, capacitor grade
Ferrotungsten	Titanium metal

Special Instructions

Asbestos, amosite	Platinum metals
Copper	Rutile
Corundum	Titanium metal
Ferromanganese, low and medium carbon	

DISPOSAL PROGRAMS

Substantial surpluses exist in a majority of the 77 stockpile items. The President approved the Cabinet-level Executive Stockpile Committee's recommendation that these surpluses be sold through long-range disposal programs. Further, these programs would be established only after appropriate interagency review, industry consultation, and application of disposal criteria which would assure minimizing the impact of sales on normal markets of producers, processors, and consumers.

To carry out this policy, interagency committees were established to develop basic data bearing on the industries concerned. These data become the background for guidelines in the preparation of specific disposal plans for OEP consideration, with

subsequent instructions to GSA to develop a draft plan. Following interdepartmental consultation, the proposed plans are then discussed with industry and foreign governments by agencies concerned, before subsequent approval by the Director of OEP and GSA's submission to Congress.

Activity continued at a high level in this area and specific long-range disposal plans were developed for most of the remaining materials for which early disposal activity was appropriate. In this respect, BDSA submitted, during the six-month period, recommendations covering plans for the disposal of 19 materials. In addition, BDSA submitted recommendations covering disposal of three additional materials which Congress authorized as emergency releases to help alleviate the supply shortage.

Long-Range Programs

Aluminum	Nickel (revision)
Aluminum oxide	Quartz crystals
Asbestos, chrysotile	Quebracho tannin
Bauxite, metallurgical grade	Silicon carbide
Chestnut tannin	Talc, block
Chromite, chemical grade	Tin (revision)
Graphite, Malagasy and other	Titanium
Manganese ore, metallurgical grade	Tungsten ores and concentrates
Mica, phlogopite block and splittings	Vanadium
	Wattle tannin

Emergency Releases

Copper
Lead
Zinc

HIGH HEAT AND SPECIAL PROPERTY MATERIALS

In accordance with the provisions of Defense Mobilization Order V-7 and its successor, Defense Mobilization Order No. 8600.1, prospective needs for high temperature and other special property materials shall be reviewed if reasonably firm minimum requirements indicate the existence of a supply deficit and the need for stockpiling in the event of an emergency. By agreement with OEP, BDSA conducts this review on an annual basis. During January-June 1965, an annual report covering the following 23 items was sent to OEP:

High Heat and Special Property Materials

Beryl	Indium
Boron (elemental)	Molybdenum
Cerium	Nickel
Cesium	Rhenium
Chromium	Rubidium
Cobalt	Silicon, high purity
Columbium	Tantalum
Gallium	Tellurium
Germanium	Titanium
Graphite, artificial (special grades)	Tungsten
Hafnium	Vanadium
	Zirconium

SPECIAL STOCKPILE STUDIES AND OTHER ACTIVITIES

Copper.—Because of a continuing tight supply situation for copper, 20,000 tons of surplus stockpile copper were sold from the Defense Production Act inventory early in 1965, and 100,000 tons from the National Stockpile inventory were authorized for disposal by the Congress on April 2, 1965. By request of OEP, the Copper Division of BDSA developed a pattern of allotments among consumers of copper, based on demonstrated needs. To accomplish this, applicants were required to submit statements covering their inventory position, orders on hand, including defense-rated orders, supply prospects and consumption levels during previous periods. These data were analyzed and made the basis for individual allotments which were then forwarded to GSA. GSA used this pattern of distribution in carrying out the disposal program.

Allotments by category of users were as follows:

20,000 Ton Distribution

33 brass mills.....	11,565
57 wire mills.....	7,501
10 foundries.....	509
15 miscellaneous users	425
Total.....	20,000

100,000 Ton Distribution

	Fire refined copper	Copper in brass and bronze	Total
49 brass mills.....	8,158	54,081	62,237
108 wire mills.....	20,287	4,038	24,295
57 foundries and miscellaneous users.....	2,150	2,095	4,245
20 ingot makers.....	437	8,302	8,739
Total.....	31,000	68,516	99,516

Cordage Fibers.—In connection with the development of estimates of supply and requirements in a mobilization period for abaca and sisal, a special study of the increasing use of man-made fibers was undertaken. At the same time, a projection of industrial consumption of natural fiber was developed to ascertain the feasibility of rotation of fiber in the stockpile. These studies are essential factors in OEP's determination of stockpile objectives for the cordage fibers.

Aluminum.—A special study of the capacity of domestic plants consuming aluminum in the form in which it is being stockpiled was prepared for OEP. The data from this study will be used to determine the adequacy of stockpile aluminum inventories at nearby storage sites to meet the wartime demands of such plants.

Activities of the Department of State Relating to Stockpiling of Strategic and Critical Materials

The Department of State provides advice and guidance regarding the effect of activities in the stockpiling program on the foreign relations segment of the United States national interest, and deals with international relations problems arising out of these activities. The Department assesses the availability of strategic and critical materials from primary producing countries, and the reliability of these sources in time of national emergency. It participates in a review of supply and requirements for each strategic material and helps to develop the stockpile objective for such materials.

The Department shares in the development of long-range plans for disposal of surplus materials and conducts consultations with foreign governments regarding proposed disposals. Based on these consultations, an evaluation is made of the effects, economic and political, of such plans in

friendly foreign countries, and thus on the foreign relations of the United States. As necessary, the Department makes recommendations for adoption or modification of the proposed plans. During the period under review, the Department conducted a large number of consultations regarding both new plans and modifications of existing plans. While a disposal program is under way, the Department receives and deals with such adverse foreign reactions as may arise and advises on new foreign policy developments which may have a bearing on an existing disposal program.

The Department reviews proposals for the barter of United States surplus agricultural commodities for strategic materials and assists and advises the Department of Agriculture on foreign policy problems arising out of the implementation of such proposals.

Activities of the Department of Agriculture Relating to Stockpiling of Strategic and Critical Materials

EXPANSION OF DOMESTIC SOURCES

The Department of Agriculture has continued a number of research projects with the objective of improving or developing domestic sources of, or substitutes for, certain strategic or critical products of agricultural origin.

Drug Plant Seeds

Seed stocks held at the National Seed Storage Laboratory, Fort Collins, Colorado consist of *Atropa belladonna*, *Digitalis Lanata*, *Digitalis purpurea*, and *Papaver somniferum*. These stocks are being stored to insure a basis for minimum emergency production requirements.

Castorbeans

Castorbean breeding and production research was continued by Agriculture in cooperation with the State Experiment Stations in California, Texas, Oklahoma, Mississippi, and Nebraska. Work was terminated at Davis, California and suspended at Stoneville, Mississippi in June 1965. The best lines developed in Mississippi were sent to Texas for tests in the area of commercial production in 1965. One or more of these lines are expected to be extremely useful, providing a basis for resistance to capsule mold and capsule drop diseases. Seed

made available to castorbean breeders should be useful in developing improved varieties or breeding lines.

Engineering research was continued on the development of a combine-type harvester that will operate effectively on damp or dry castors. Improved harvester components also were designed. While there is need for further modification, data and information obtained should be valuable in further development of castor harvesters.

Data also have been obtained which will serve as guidelines for designing driers and drying requirements.

Present plans are to terminate this research.

Cordage Fibers

Kenaf.—Production research on kenaf was continued to determine the effects of planting dates, planting methods, and various plant nutrients on seed or fiber yields. In strain trials, the varieties Everglades 41 and 71 continued to be superior in fiber yield at Belle Glade, Florida. However, they were inferior in yield to the variety BS 52-52 when grown at Experiment, Georgia.

Species were screened for resistance to root-knot nematodes. A wild strain from Kenya, significantly more resistant, was successfully crossed with several cultivated strains.

Through engineering research, improved harvesting and processing machinery and methods for the production of kenaf and other jute-like fibers have been developed. A recently tested tying attachment on the harvester-ribboner results in a savings of manpower in operating the machine. The field harvester-ribboner with tying mechanism and washer can be considered ready for commercial use. A machine similar to the research model was built commercially for Sudan, Africa, and made ready for tests there. Studies were also made of machinery developments for kenaf, jute, and like fibers in Europe and of growing and processing developments in Asia.

Present plans are to terminate this research.

Sansevieria.—Experiments were concluded on the source, time, and frequency of applications of nitrogen to *Sansevieria trifasciata*. In studies of fiber yield and cold tolerance, Florida H-13, and F₁ hybrid, continues to be superior to other hybrids and natural species. The hybrid is being used in extensive cultural experiments to determine the most appropriate methods for management. None of these experiments was harvested during the reporting period.

Additional refinements in components of the harvester-decorticator developed for sansevieria have been completed and successfully field tested. However, a new machine of greater size and capacity would be required in order to obtain data on the cost of producing sansevieria fiber on a commercial scale.

Present plans are to terminate this research.

FOREST PRODUCTS AND WOOD UTILIZATION RESEARCH

Results of such studies have potential advantages in the handling of materials in the National Stockpile. For example, research on the performance of plywood pallets showed that they give satisfactory

service and are more economical on a "per use" basis. Research on pallets also showed that several little-used West Coast wood species were suitable for pallets

BARTER ACTIVITIES

An interagency review group is considering present and past barter acquisition procedures. This group will submit recommendations to the Secretary of Agriculture for obtaining the maximum degree of competition among U.S. firms offering strategic materials in barter transactions. Pending completion of this review, no new barter arrangements will be made for strategic and critical materials for the stockpile.

No barter contracts for strategic materials were negotiated during the January-June 1965 period. Strategic materials valued at \$15.2 million were delivered during this reporting period, bringing the cumulative total of strategic materials delivered to the Commodity Credit Corporation (CCC) under barter contracts since 1950 to approximately \$1.6 billion. Of this total, \$223.3 million were transferred to the National Stockpile and about \$1.3 billion to the Supplemental Stockpile through June 30, 1965.

TRANSFERS FROM STOCKPILE FOR DISPOSAL

In 1962, all National Stockpile extra long staple cotton was transferred to CCC—47,518 bales of domestic cotton and about 123,000 bales (running) of Egyptian and Sudanese cotton.

The domestic cotton was added to CCC's inventory, resulting in a total of 53,740 bales. From August 1, 1962, through December 31, 1964, 8,850 bales were sold under a CCC sales program, and 2,267 additional bales have been sold between January 1, 1965 and June 30, 1965, reducing this inventory to approximately 42,600 bales.



Harvesting PYRETHRUM flowers
in Cotopaxi Province, Ecuador.

Pyrethrum is a daisy-like plant, the flowers of which contain pyrethrins, an effective insecticide. The cultivation of pyrethrum flowers requires a tropical climate and high elevation. Pyrethrum has two characteristics which make it unique among insecticides—it is much safer to use around food than synthetic organic insecticides, and its use results in the quick "knockdown" of insects which is particularly effective in preventing transmission of human and plant disease. Stockpile inventory consists of 67,000 pounds of 20% extract in kerosene.

Activities of the Department of the Interior Relating to Stockpiling of Strategic and Critical Materials

The Department of the Interior has the responsibility for the management, conservation, and adequate development of the Nation's natural resources to meet the requirements of national security and an expanding national economy. The Department assists the Office of Emergency Planning in formulating and carrying out programs for the stockpiling of critical materials. The Department of the Interior conducts research in exploration, mining, beneficiation, and metallurgy and compiles information on production and consumption for use in stockpile planning. The Department also provides advice and recommendations regarding Purchase Specifications and Special Instructions for stockpiling, storage procedures, and stockpile disposal programs.

The Department is responsible for preparedness programs covering electric power, petroleum and gas, solid fuels and minerals, and conducts resource-requirements studies in order to identify problem areas and develop recommendations and programs for the maintenance of a sufficient mobilization base. The Department also administers programs to encourage the exploration, development, and mining of minerals and metals for emergency purposes.

Special and technical reports, issued during January-June 1965, having a relationship to strategic and critical materials are as follows:

BUREAU OF MINES

Minerals Yearbook 1963, Volume IV

Volume IV reviews strategic and critical mineral developments for the countries of the world (excluding the United States).

Mineral Facts and Problems, 1965 Edition (Bulletin 630)

All preprint chapters have been published.

Bulletins

- 619 Corrosion Properties of Titanium and Its Alloys.
- 624 Manganese-Copper Damping Alloys.

Reports of Investigations

- 6569 Beneficiation and Hydrometallurgical Treatment of Complex Mercury Sulfide Products.
- 6572 Investigation of Beryllium Deposits in the Northern Virgin Mountains of Clark County, Nev., and Mohave County, Ariz.
- 6573 Methods for Producing Alumina From Clay.
- 6576 Experimental Caustic Leaching of Oxidized Zinc Ores and Minerals and the Recovery of Zinc From Leach Solutions.
- 6577 Extraction and Separation of Rare-Earth Elements in Idaho Euxenite Concentrate.
- 6578 Evaluation of Electrowon Tungsten Powder.
- 6582 Specific Conductance, pH, Density, and Viscosity of Sodium Aluminate Solutions and Some Properties of the Aluminate Ion.
- 6583 Heats of Formation of Lithium Chloride and Lithium Oxalate, Including Details on the Construction and Operation of a Solution Calorimeter.
- 6587 Tin-Lode Investigations, Potato Mountain Area, Seward Peninsula, Alaska.
- 6588 Electrorefining of Titanium-Oxygen Alloys.
- 6589 Anionic-Cationic Flotation of Mica Ores From Alabama and North Carolina.
- 6590 Conversion to Metal of Dimolybdenum Carbide Electrosynthesized From Molybdenite.
- 6591 Effects of Substituting Cobalt for Nickel on the Corrosion Resistance of Two Types of Stainless Steel.
- 6593 Extraction of Aluminum From $2\text{Na}_2\text{O} \cdot 3\text{CaO} \cdot 5\text{Al}_2\text{O}_3$ in Water and in Solutions of NaOH and Na_2CO_3 .
- 6594 The Hafnium-Vanadium System.
- 6595 Field Testing of the Explosive-Anchored Rockbolt.
- 6596 The Recovery of Manganese From Open-Hearth Slags and Low-Grade Ores by Smelting and Selective Oxidation.
- 6599 Magnesium Reduction of Rutile.
- 6601 Extraction and Separation of Rare-Earth Elements and Yttrium with Dodecyl Phosphoric Acid-Kerosine Solvent.
- 6609 Recent Catalyst Developments in the Hot-Gas-Recycle Process.

Reports of Investigations—Con.

- 6612 Extraction of Tungsten From Ore Concentrates by Chlorination.
- 6613 Load Relations in Preloaded Rockbolt Testing.
- 6617 Heats of Formation of Anhydrous Sulfates of Cadmium, Cobalt, Copper, Nickel, and Zinc.
- 6618 Heats of Formation of Goethite, Ferrous Vanadate, and Manganese Molybdate.
- 6628 Properties of Vanadium-Carbon Alloys.
- 6631 Electrorefining Vanadium in a Molten Bromide Electrolyte.
- 6632 Spectrochemical Analysis of Tungsten.
- 6634 Design of Drill-Hole Grid Spacings for Evaluating Low-Grade Copper Deposits.
- 6635 Extraction of Tantalum and Columbium From Ores and Concentrates by Chlorination.
- 6636 Stainless Steel-Gadolinium Alloys.
- 6637 Effects of Interstitial Impurities on the Mechanical Properties of Electrorefined Vanadium at Low Temperatures.

Information Circulars

- 8225 Copper. A Materials Survey.
- 8252 Mercury Potential of the United States.
- 8257 Silver: Facts, Estimates, and Projections.
- 8264 Brown Iron Ore Resources: Quitman County, Ga.
- 8266 Review and Evaluation of Silver-Production Techniques.

Special Publications

The Titanium Industries and Their Relation to the Pacific Northwest.
Prepared under a cooperative agreement with the Bonneville Power Administration.

U.S. GEOLOGICAL SURVEY

Professional Papers

- 459-B Ore deposits of the Antler Peak quadrangle, Humboldt and Lander Counties, Nevada, by R. J. Roberts and D. C. Arnold (silver, copper, antimony, lead, zinc, cadmium, manganese).
- 471 Geology of the San Manuel area, Pinal County, Arizona, by S. C. Creasey with a section on ore deposits, by J. D. Pelletier and S. C. Creasey (copper, lead, zinc-gold).
- 484 Geomorphology of the Shenandoah Valley, Virginia and West Virginia, and origin of the residual ore deposits, by J. T. Hack (manganese).
- 489 Geology and ore deposits of the Metaline zinc-lead district, Pend Oreille County, Washington, by McC. G. Dings and D. H. Whitebread.
- 501-D, 525-B Geological Survey Research 1964 and 1965. Short papers in geology and hydrology. Scientific notes and summaries of investigations.

Bulletins

- 1125 Geology and ore deposits of the White Canyon area, San Juan and Garfield Counties, Utah, by R. E. Thaden, A. F. Trites, Jr., and T. L. Fennell (copper).
- 1169 Geology of the Curlew quadrangle, Ferry County, Washington, by R. L. Parker and J. A. Calkins (copper, silver).
- 1181-O Geology of the Independence quadrangle, Inyo County, California, by D. C. Ross (lead, copper, tungsten, asbestos, talc).
- 1184 Geology of the Ciales quadrangle, Puerto Rico, by H. L. Berryhill, Jr. (copper).
- 1198-C Bryophytes associated with mineral deposits and solutions in Alaska, by H. T. Shacklette (copper, antimony, mercury).
- 1199-B Bauxite and kaolin deposits of Mississippi, exclusive of the Tippah-Benton district, by L. C. Conant.
- 1199-C Bauxite deposits of the Tippah-Benton district, Mississippi, by H. A. Tourtelot.
- 1199-D Bauxite deposits of the Margerum district, Alabama, by H. R. Bergquist and E. F. Overstreet.
- Bauxite deposits of the Eufaula district, Alabama, by W. C. Warren and L. D. Clark.
- Bauxite deposits of the Springvale district, Georgia, by L. D. Clark.
- Bauxite deposits of Virginia, by W. C. Warren, Josiah Bridge, and E. F. Overstreet.
- Geochemistry of the platinum metals, by T. L. Wright and Michael Fleischer.

STATUS OF OBLIGATIONAL OPERATIONS
Under PL 117 and PL 520 for The National Stockpile
As of June 30, 1965

AUTHORITY	APPROPRIATED FUNDS <u>a/</u>	AUTHORIZATIONS FOR		TOTAL OBLIGATIONAL AUTHORITY (CUMULATIVE) <u>d/</u>
		MAKING ADVANCE CONTRACTS <u>b/</u>	LIQUIDATING OUTSTANDING ADVANCE CONTRACTS <u>c/</u>	
<u>Under PL 117 - 76th Congress</u>				
PL 361 - 76th Congress, August 9, 1939	\$ 10,000,000	\$	\$	\$ 10,000,000
PL 442 - 76th Congress, March 25, 1940	12,500,000			22,500,000
PL 667 - 76th Congress, June 26, 1940	<u>47,500,000</u>			<u>70,000,000 <u>e/</u></u>
<u>Under PL 520 - 79th Congress</u>				
PL 663 - 79th Congress, August 8, 1946	100,000,000	-	-	100,000,000
PL 271 - 80th Congress, July 30, 1947	100,000,000	75,000,000	-	275,000,000
PL 785 - 80th Congress, June 25, 1948	225,000,000	300,000,000	-	800,000,000
PL 785 - 80th Congress, June 25, 1948	75,000,000	-	75,000,000	800,000,000
PL 119 - 81st Congress, June 23, 1949	40,000,000	270,000,000	-	1,110,000,000
PL 150 - 81st Congress, June 30, 1949	275,000,000	250,000,000	-	1,635,000,000
PL 150 - 81st Congress, June 30, 1949	250,000,000	-	250,000,000	1,635,000,000
PL 436 - 81st Congress, October 29, 1949	-	-	100,000,000 <u>f/</u>	1,535,000,000
PL 759 - 81st Congress, September 6, 1950	365,000,000	-	240,000,000	1,660,000,000
PL 759 - 81st Congress, September 6, 1950	240,000,000	125,000,000	-	2,025,000,000
PL 843 - 81st Congress, September 27, 1950	573,232,449 <u>g/</u>	-	-	2,598,232,449
PL 911 - 81st Congress, January 6, 1951	1,834,911,000	-	-	4,433,143,449
PL 253 - 82nd Congress, November 1, 1951	590,216,500	-	-	5,023,359,949
PL 253 - 82nd Congress, November 1, 1951	200,000,000	-	200,000,000	5,023,359,949
PL 455 - 82nd Congress, July 25, 1952	203,979,000	-	70,000,000	5,157,338,949
PL 176 - 83rd Congress, July 31, 1953	-	-	30,000,000	5,127,338,949
PL 428 - 83rd Congress, June 24, 1954	-	-	27,600,000	5,099,738,949
PL 663 - 83rd Congress, August 26, 1954	379,952,000 <u>h/</u>	-	-	5,479,690,949
PL 112 - 84th Congress, June 30, 1955	321,721,000 <u>i/</u>	-	-	5,801,411,949
PL 112 - 84th Congress, June 30, 1955	27,400,000	-	27,400,000	5,801,411,949
PL 844 - 85th Congress, August 28, 1958	3,000,000	-	-	5,804,411,949
Reincinded by PL 255 - 86th Congress, September 14, 1959	-58,370,923 <u>j/</u>	-	-	5,746,041,026
PL 626 - 86th Congress, July 12, 1960	22,237,000 <u>k/</u>	-	-	5,768,278,026
PL 141 - 87th Congress, August 17, 1961	16,682,510 <u>l/</u>	-	-	5,784,960,536
PL 741 - 87th Congress, October 3, 1962	8,729,887 <u>m/</u>	-	-	5,793,690,423
PL 215 - 88th Congress, December 19, 1963	23,925,000	-	-	5,817,615,423 <u>n/</u>
PL 507 - 88th Congress, August 30, 1964	9,319,168 <u>o/</u>	-	-	5,826,934,591
PL 16 - 89th Congress, April 30, 1965	<u>118,500</u>	-	-	<u>5,827,053,091</u>
Total PL 117 and 520	<u>\$5,897,053,091</u>	<u>\$1,020,000,000</u>	<u>\$1,020,000,000</u>	<u>\$5,897,053,091</u>

a/ Congressional appropriations of funds for stockpiling purposes.

SOURCE: GENERAL SERVICES ADMINISTRATION

b/ Congressional appropriations of contracting authority for stockpiling purposes in advance of appropriation of funds.

c/ Congressional authorization to liquidate outstanding obligations incurred under previously granted advance contract authority.

d/ Cumulative total of appropriated funds and advance contract authorization, less authorization to liquidate outstanding advance contract.

e/ Excludes \$8,845,792 received from sale of stockpile materials for wartime consumption. Receipts were returned to Treasury, February 1948.

f/ Cancellation of previously authorized authority to make contracts.

g/ Excludes \$25,406,921 transferred to operating expenses for rehabilitation of Government-owned material producing plants.

h/ Excludes \$48,000 transferred to Transportation and Public Utilities Service, GSA.

i/ Excludes \$430,000 transferred to Transportation and Public Utilities Service, GSA and \$199,349,000 transferred to General Fund Receipts on June 27, 1956 - PL 623 - 84th Congress.

j/ As of June 30, 1959 this amount included cash of \$32,350,792 and receivables of \$6,020,131.

k/ Excludes \$7,763,000 transferred to other GSA Funds for classified and wage board salary increases during 1961.

l/ Appropriation of \$40,000,000 of which \$22,700 transferred to Office of Administrator, GSA and \$23,296,790 transferred to General Fund Receipts.

m/ Appropriation of \$18,095,000 less transfers to General Fund Receipts of \$9,365,113.

n/ Excludes receipts from rotational sales.

o/ Appropriation of \$17,755,000 less returns to Treasury of \$8,435,832.

TOTAL OBLIGATIONS AND EXPENDITURES OF STOCKPILING FUNDS
Under PL 117 and PL 520 for THE NATIONAL STOCKPILE
CUMULATIVE AND BY FISCAL PERIOD THROUGH JUNE 30, 1965

Fiscal Period	OBLIGATIONS INCURRED <u>A/</u>		EXPENDITURES <u>B/</u>	
	Net Change By Fiscal Period	Cumulative As of End of Period	By Fiscal Period	Cumulative As of End of Period
Prior to Fiscal Year 1948	\$ 123,871,685	\$ 123,871,685	\$ 66,330,731	\$ 66,330,731
Fiscal Year 1948	252,901,411	376,773,096	82,907,575	149,238,306
Fiscal Year 1949	459,756,881	836,539,977	304,486,117	453,724,483
Fiscal Year 1950	680,427,821	1,516,967,798	440,834,970	894,559,453
Fiscal Year 1951	2,075,317,099	3,592,284,897	655,537,199	1,550,096,652
Fiscal Year 1952	948,117,547	4,540,402,444	844,683,459	2,394,780,111
Fiscal Year 1953	252,375,163	4,792,777,607	906,158,850	3,300,938,961
Fiscal Year 1954	116,586,581	4,909,364,288	644,760,321	3,945,699,282
Fiscal Year 1955	321,799,833	5,231,164,121	801,310,094	4,747,009,376
Fiscal Year 1956 <u>C/</u>	251,692,667	5,482,856,788	382,011,786 <u>C/</u>	5,129,021,162 <u>C/</u>
Fiscal Year 1957	190,000,109	5,672,856,897	354,576,558	5,483,597,720
Fiscal Year 1958	54,473,250	5,727,330,147	173,753,997	5,657,351,717
Fiscal Year 1959	38,710,879	5,766,041,026	65,260,098	5,722,611,815
Fiscal Year 1960	19,859,290	5,785,900,316	49,227,142	5,771,838,957
Fiscal Year 1961	29,082,919	5,814,983,235	33,325,431	5,805,164,388
Fiscal Year 1962	31,179,407	5,846,162,642	33,695,431	5,838,859,819
Fiscal Year 1963	17,414,900	5,863,577,542	22,104,176	5,860,963,995
Fiscal Year 1964	15,489,597	5,879,067,139	16,091,067	5,877,055,062
Fiscal Year 1965 -	16,288,732	5,895,355,871	16,561,275	5,893,616,337

A/ Figures are the sum of obligations incurred under PL 520, 79th Congress and PL 117, 76th Congress.
Final obligations under PL 117, 76th Congress were incurred in Fiscal Year 1949.

B/ Figures are the sum of expenditures under PL 520, 79th Congress and PL 117, 76th Congress.
Final expenditures under PL 117, 76th Congress were made in Fiscal year 1951.

C/ 1956 and subsequent fiscal periods and cumulative expenditures are reported on an accrual basis.

SOURCE: GENERAL SERVICES ADMINISTRATION

EXPENDITURES OF STOCKPILE FUNDS, BY TYPE

(for the National Stockpile)

Cumulative and for Last Half Fiscal Year 1965

Type of Expenditure	Cumulative Through December 31, 1964	Six Months Ended June 30, 1965	Cumulative Through June 30, 1965
Expenditures			
Gross Total	\$6,428,067,612	\$8,854,927	\$6,436,922,539
Less: Adjustment for Receipts from Rotation Sales and Reimbursements	543,010,297	295,905	543,306,202
Net Total	5,885,057,315	8,559,022	5,893,616,337
Material Acquisition Costs, Total	5,436,931,611	526,013	5,437,457,624
Stockpile Maintenance Costs, Total	387,248,742	6,378,677	393,627,419
Facility Construction	43,772,457	-	43,772,457
Storage and Handling Costs	240,723,537	6,381,061	247,104,598
Net Rotation Costs	102,752,748	-2,384	102,750,364
Administrative Costs	52,756,492	1,150,277	53,906,769
Operations, Machine Tool Program	8,120,470	504,055	8,624,525

Cumulative figures are the total of expenditures under PL 117, 76th Congress and PL 520, 79th Congress. Expenditures under PL 117 totaled \$70,000,000 of which \$55,625,237 was for materials acquisition costs and \$14,374,763 was for other costs. Final expenditures under PL 117 were made in FY 1951.

SOURCE: GENERAL SERVICES ADMINISTRATION